

Remarks/ Arguments

Upon entry of the foregoing amendments, claims 1 to 3, 5 to 7, 9 to 19, and 26 to 39 will be pending in the present patent application. Claims 1 and 7 have been amended, without prejudice. Claims 4, 8, and 16 have been canceled, without prejudice. Claims 20 to 25 have been canceled as a result of the finality of the restriction requirement as indicated in the Action. Applicants reserve the right to present the subject matter of claims 20 to 25 in a later-filed divisional patent application. Claims 26 to 39 are new. Support for new claims 26 to 39 is found throughout Applicants' specification such as, for example, in the original claims.

Support for the foregoing amendments is found throughout Applicants' specification such as, for example, at page 8, lines 1 to 8, and page 8, paragraph [0024], including Table 1. No new matter has been added.

The Action includes rejections under 35 U.S.C. §§ 102(b), 102(e), 103(a), and 112, first paragraph. In view of the foregoing amendments and the following remarks, reconsideration and withdrawal of the rejections are requested respectfully.

Discussion of the Claim Objections

Claim 1 has been objected to for allegedly repeating the phrase "a hydrocarbyl group having a number of carbon atoms ranging from 1 to 5" (Action at 3). Applicants respectfully traverse this objection as the above-identified phrase is not repeated. Claim 1 recites that the variable "R" can include "a hydrogen atom, a **hydrocarbyl** group having a number of carbon atoms ranging from 1 to 5, a **halocarbyl** group having a number of carbon atoms ranging from 1 to 5, or a **halohydrocarbyl** group having a number of carbon atoms ranging from 1 to 5". Although the terms "hydrocarbyl", "halocarbyl", and "halohydrocarbyl" appear

similar, the terms are not the same. Accordingly, Applicants request respectfully that the objection to claim 1 be reconsidered and withdrawn.

Claim 8 has also been objected to for a number of reasons alleged at page 3 of the Action. Since, however, claim 8 has been canceled by the foregoing amendments, Applicants submit respectfully that this objection is now moot.

Discussion to the Rejection Under 35 U.S.C. § 112, First Paragraph

Claim 7 has been rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Although Applicants disagree that claim 7 lacks enablement, claim 7 has been amended above thus rendering the rejection moot. Accordingly, reconsideration and withdrawal of the rejection are requested respectfully.

Discussion of the Rejections Under 35 U.S.C. § 102

Claims 1, 2, and 4 to 8 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated U.S. Patent No. 6,242,359 to Misra ("the Misra patent"). Applicants disagree respectfully as the Misra patent does not teach each and every element of Applicants' claimed invention as amended above.

As amended, Applicants' claimed invention defines a mixture for etching a dielectric material in a layered substrate, the mixture comprising an unsaturated oxygenated fluorocarbon having the formula $C_xF_yO_zR_q$ as defined by, for example, claim 1, that is a compound selected from the group consisting of epoxides, diepoxides, ketones, diketones, esters, ethers, acyl fluorides, alcohols, aldehydes, peroxides, and combinations thereof. Significantly, ***when the unsaturated oxygenated fluorocarbon is a diketone, then x is a number from 4 to 10 (see, claim 1).***

The Action alleges that the compound oxalyl fluoride $(\text{COF})_2$ disclosed at column 5, lines 19-20 of the Misra patent, anticipates claim 1. Applicants submit respectfully that, although such compound is a diketone compound, it is excluded from the scope of Applicants' claim 1 because x is 2, which is not a number from 4 to 10.

Claims 2, 6, 7, and 8 depend from claim 1 and have also been rejected as allegedly anticipated by the Misra patent. Since, however, the Misra patent does not disclose each element of the base claim, even if the Misra patent did disclose the additional elements recited in dependent claims 2, 6, 7, and 8 (which it does not), the Misra patent would still be insufficient to anticipate dependent claims 2, 6, 7, and 8. Accordingly, reconsideration and withdrawal of the rejections based upon the Misra patent are requested respectfully.

Claims 1, 2, 4, 5, 7, 8, and 16 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated U.S. patent application Publication No. 2004/0097079 to Mimura ("the Mimura publication"). Applicants disagree respectfully as the Mimura publication does not teach each and every element of Applicants' claimed invention as amended above.

As amended, Applicants' claimed invention defines a mixture for etching a dielectric material in a layered substrate, the mixture comprising an unsaturated oxygenated fluorocarbon having the formula $\text{C}_x\text{F}_y\text{O}_z\text{R}_q$ as defined by, for example, claim 1, that is a compound selected from the group consisting of epoxides, diepoxides, ketones, diketones, esters, ethers, acyl fluorides, alcohols, aldehydes, peroxides, and combinations thereof. Significantly, when the unsaturated oxygenated fluorocarbon is a diketone, then x is a number from 4 to 10 and provided that ***when the unsaturated oxygenated fluorocarbon is a diacyl fluoride, then z is 1*** (see, claim 1).

The Action alleges that the compounds $\text{C}_3\text{F}_4\text{O}_2$ and $\text{C}_4\text{F}_6\text{O}_2$ disclosed at paragraph [0059] of the Mimura publication are diacyl chlorides that anticipate claims 1, 2, 4, and 16. Applicants submit respectfully that, the present claims as amended do not include include

diacyl chloride within their scope. Accordingly, the Mimura publication is not sufficient to anticipate Applicants' claims as amended.

Claims 5, 7, and 8 depend from claim 1 and have also been rejected as allegedly anticipated by the Mimura publication. Since, however, the Mimura publication does not disclose each element of the base claim, even if the Mimura publication did disclose the additional elements recited in dependent claims 5, 7, and 8 (which it does not), the Mimura publication would still be insufficient to anticipate dependent claims 5, 7, and 8. Accordingly, reconsideration and withdrawal of the rejections based upon the Mimura publication are requested respectfully.

Discussion of the Rejection Under 35 U.S.C. § 103(a)

Claim 3 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over the Misra patent. Applicants respectfully traverse this rejection as one of ordinary skill in the art at the time of the present invention would not have been motivated to modify the Misra patent in such a way that would produce Applicants' claimed invention.

Claim 3 depends from independent claim 1. As noted above, the Misra patent does not teach each and every limitation of Applicants' claimed invention as defined by independent claim 1 as amended above. Accordingly, even if the Misra patent did teach or suggest the limitations of dependent claim 3 (which it does not), it is still incapable of being modified in such a way as to teach or suggest each and every limitation of Applicants' claimed invention. Accordingly, reconsideration and withdrawal of the rejection of claim 3 under 35 U.S.C. § 103(a) is requested respectfully.

Claims 3 and 6 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over the Mimura publication. Applicants respectfully traverse this rejection as one of ordinary skill in the art at the time of the present invention would not have been

motivated to modify the Mimura publication in such a way that would produce Applicants' claimed invention.

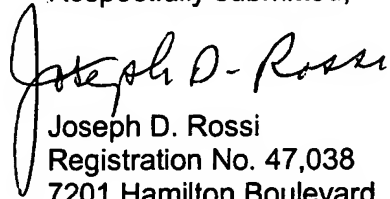
Claims 3 and 6 depend from independent claim 1. As noted above, the Misra patent does not teach each and every limitation of Applicants' claimed invention as defined by independent claim 1. as amended above. Accordingly, even if the Mimura publication did teach or suggest the limitations of dependent claims 3 and 6 (which it does not), it is still incapable of being modified in such a way as to teach or suggest each and every limitation of Applicants' claimed invention. Accordingly, reconsideration and withdrawal of the rejection of claims 3 and 6 under 35 U.S.C. § 103(a) is requested respectfully.

Conclusion

Applicants believe that the foregoing constitutes a complete and full response to the Action of record. Applicants respectfully submit that this application is now in condition for allowance. Accordingly, an indication of allowability and an early Notice of Allowance are respectfully requested.

The Commissioner is hereby authorized to charge the fee required and any additional fees that may be needed to Deposit Account No. 01-0493 in the name of Air Products and Chemicals, Inc.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Joseph D. Rossi". The signature is written in a cursive style with a large, looped initial "J".

Joseph D. Rossi
Registration No. 47,038
7201 Hamilton Boulevard
Allentown, PA 18195-1501
(610) 481-8169